LINEAR GRAPHS

SHORT QUESTIONS

Q.1- Find three points on the line whose equation is y = 2x

Solution:-

The given equation is $y = 2x$

For $x = 0$, $y = 2(0) = 0$

$\Rightarrow (0, 0)$ is on the line.

For $x = 1$, $y = 2(1) = 2$

$\Rightarrow (1, 2)$ is on the line.

For $x = 2$, $y = 2(2) = 4$

$\Rightarrow (2, 4)$ is on the line.

Thus $(0,0),(1,2),(2,4)$ satisfy the equation $y = 2x$.

Q.2- Construct the table and draw the line whose equation is y = 2x + 1

Solution:-

Let us consider the equation $y = 2x + 1$

When $x = -2,\ y = 2(-2) + 1 = -3$

$x = -1,\ y = 2(-1) + 1 = -1$

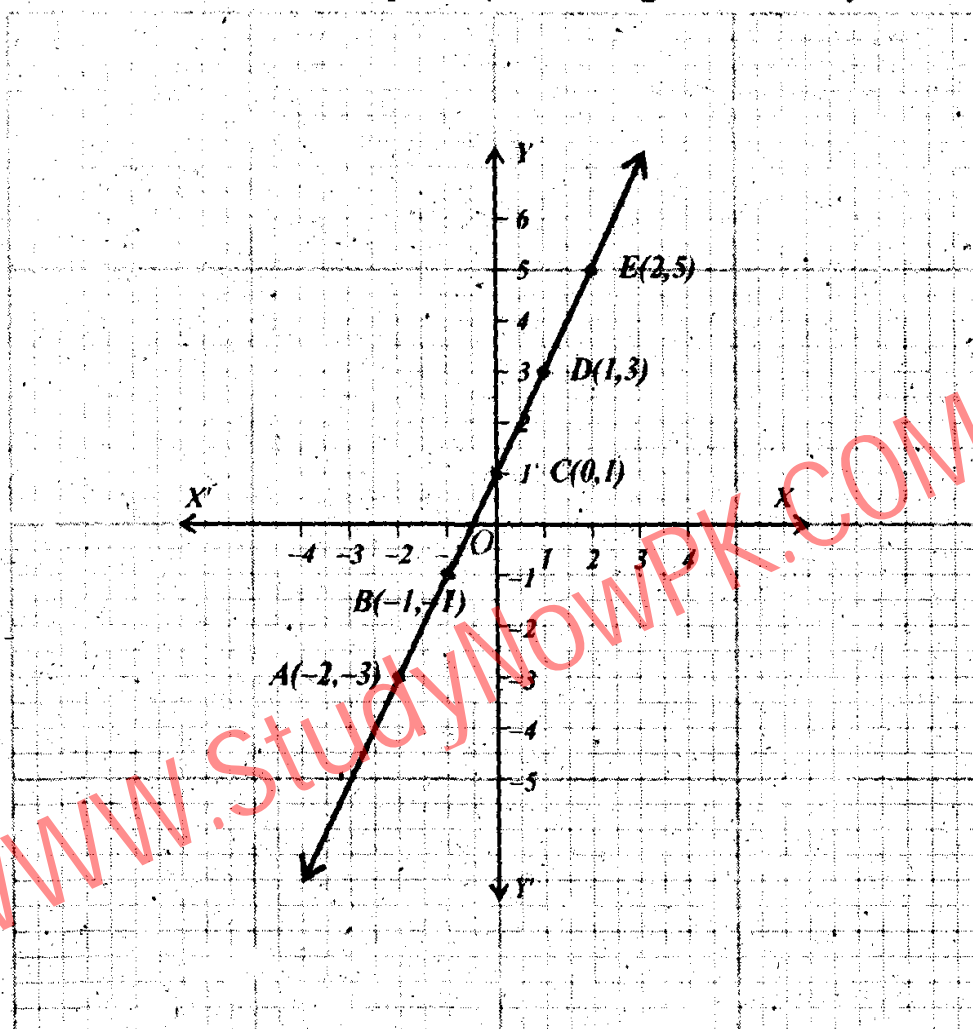
$x = 0,\ y = 2(0) + 1 = 1$

$x = 1,\ y = 2(1) + 1 = 3$

$x = 2,\ y = 2(2) + 1 = 5$

The following table shows five pairs of values of x and y mentioned above.

x	-2	-1	0	1	2
$y=2x+1$	-3	-1	1	3	5

We use 2 small squares $=1$, along both x and y-axis.

Q.3- Draw the graph of $y=2x+6$.

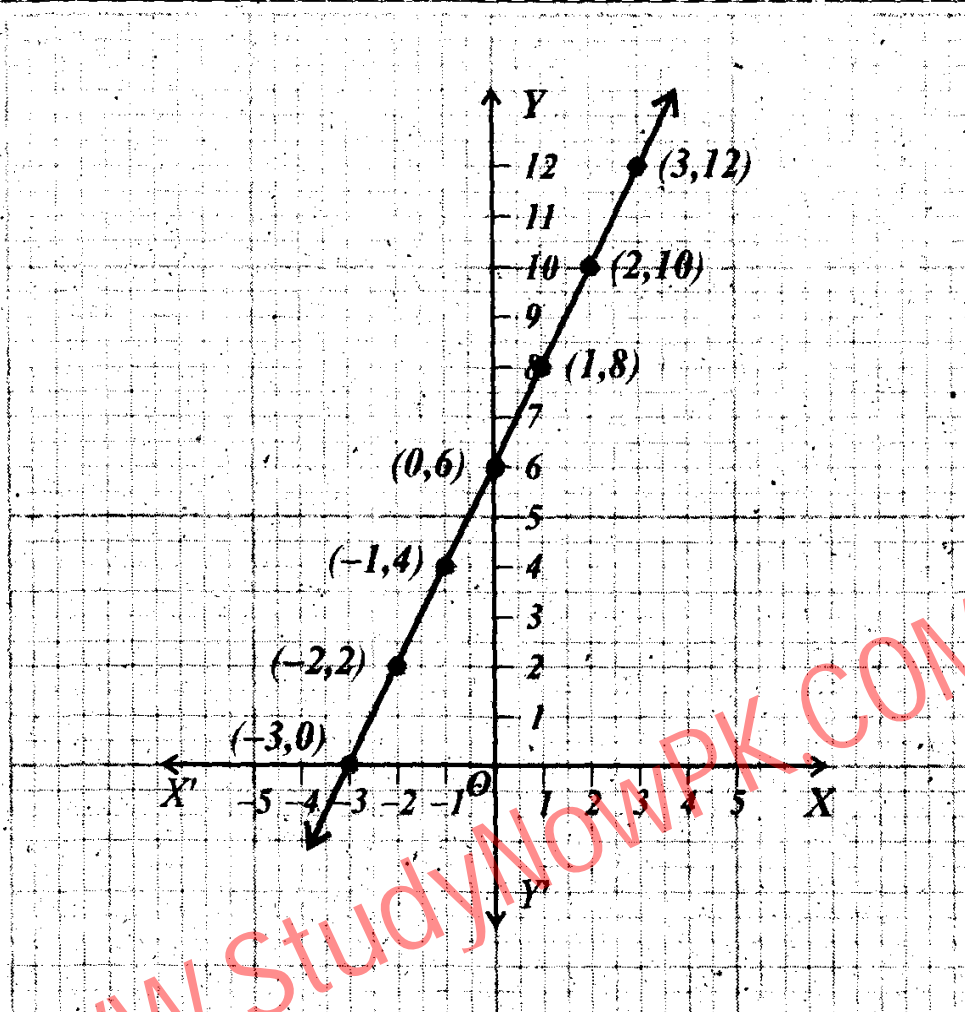
Solution:-

If we put $x=0$ in $y=2x+6$

We get $y=2(0)+6=6$ i. e $y=6$

Similarly putting $x=\pm 1, \pm 2, \pm 3, \ldots$

We get the value of y as shown in the table.

x	-3	-2	0	1	2	3
y	0	2	6	8	10	12

Q.4- Graph the equation $x = -2$

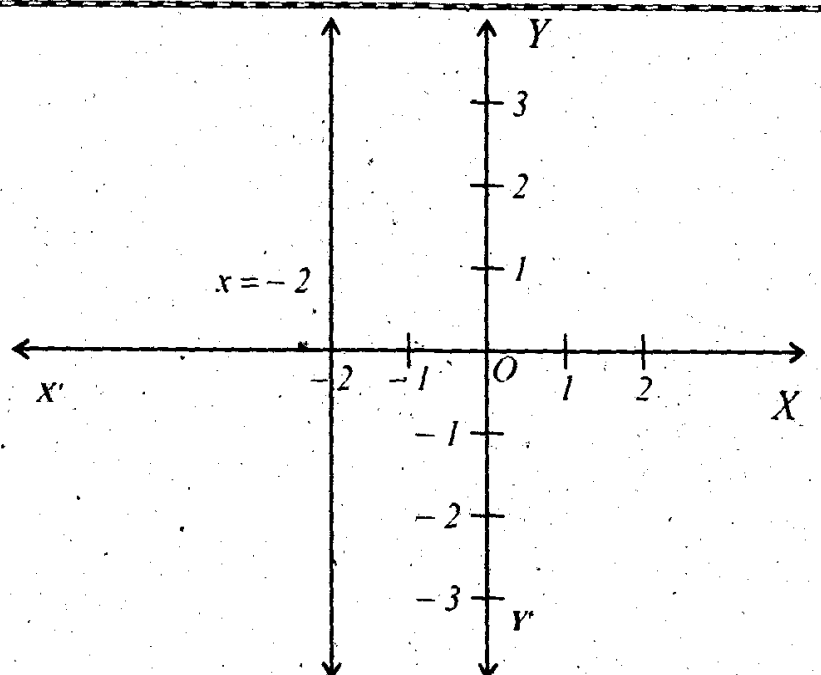
Solution:-

The equation $x = -2$ can be written as $x + 0y = -2$, if we put $y = 0$ in this equation, we get $x = -2$. Similarly putting $y = \pm 1, \pm 2, \pm 3, \ldots$

in the equation $x = +0$, $y = -2$, we have $x = -2$.

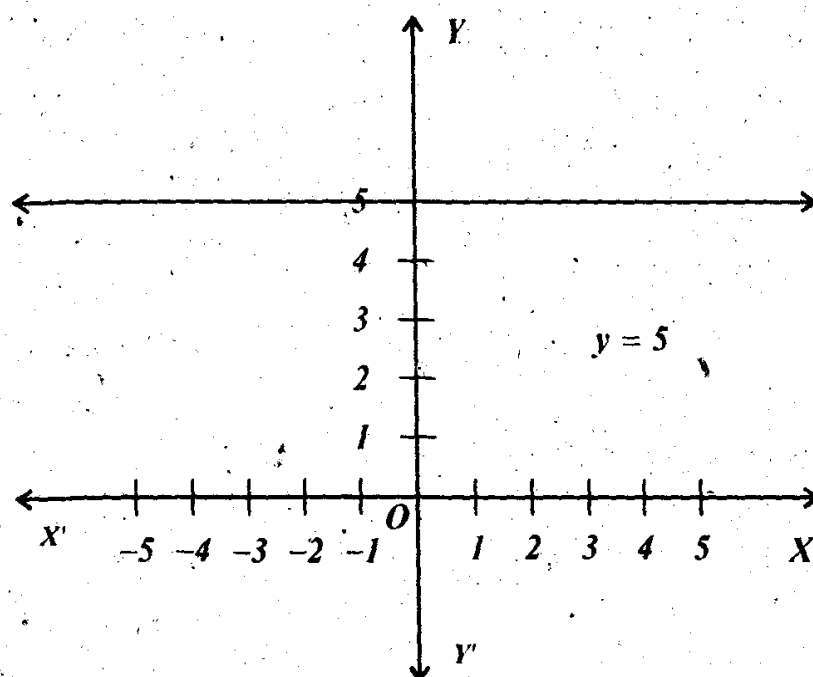
For all values of y we have $x = -2$, i.e. x remains constant.

Table of values of x and y is as under:

x	-2	-2	-2	-2	-2	-2	-2
y	-3	-2	-1	0	1	2	3

Q.5- Draw the graph of equation $y = 5$

Solution:-The equation $y = 5$ can be written as $y = 0 \times x + 5$

If we put $x = 0$ in the equation we get $y = 5$.Similarly putting $x = \pm 1, \pm 2, \pm 3, ...$ in the equation $y = 0, x + 5$, we have $y = 5$. For all values of x We have $y = 5$, i.e. y remains constant. Table of value of x and y is as under:

x	-3	-2	-1	0	1	2	3
y	5	5	5	5	5	5	5

Q.6- Define Domain and Range of a linear funtion.

Ans. A funtion is a set of ordered pair of the kind (x, y) where $x, y \in R$. The set of all suitable values of x is called Domain and the set of all suitable values of y is called Range of the function. Usually, in case of linear funtion.

Domain of funtion = Range of funtion.

And both of these are equal to the set of real numbers.

Q.7- Define integral subset of domain and integral subset of Range of a funtion.

Ans. The set of only suitable integral values of x for a linear function is called integral subset of Domain of the funtion.

Q.8- Draw the graph of $y = 2x + 1$ and find integral subsets of Domain and Rang of given funtion.

Solution:

The graph shown in the figure is of a function $y = 2x + 1$. This graph has been drawn with the help of the following ordered pairs. $A(-2,-3)$, $B(-1,-1)$ $C(0,1)$, $D(1,3)$ and $E(2,5)$.

From these ordered pairs we construct a table consisting the value of x and y.

x	-2	-2	0	1	2
y	-3	-1	1	3	5

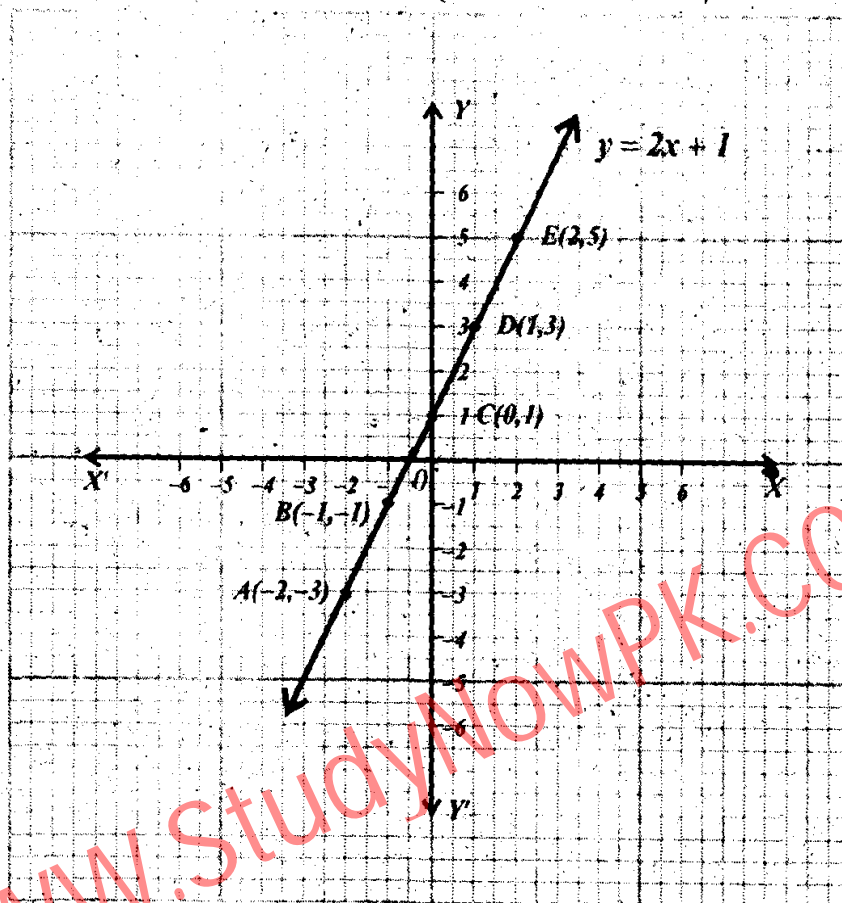
In a function $y = 2x + 1$, the set consisting of the values of x is called the domain and the set consisting the values of y is called the range of the function.

Thus for $y = 2x + 1$:

Integral subset of Domain of function

$= \{\ldots, -2, -1, 0, 1, 2, \ldots\}$

Integral subset of Range of function

$= \{\ldots, -3, -1, 1, 3, 5, \ldots\}$

Q.9- What is meant by conversssion graph?

Ans. Two different units of a single physical quantity can be intercoverted by a simple linear graph. The straight line used for this purpose is called the converssion graph.

Q.10- Define the term "Ordered Pair".

Ans. An ordered pair is a set of two elements in which order of elements is also important. Ordered pair of x and y is denoted as. (x,y)

Note that for two sets

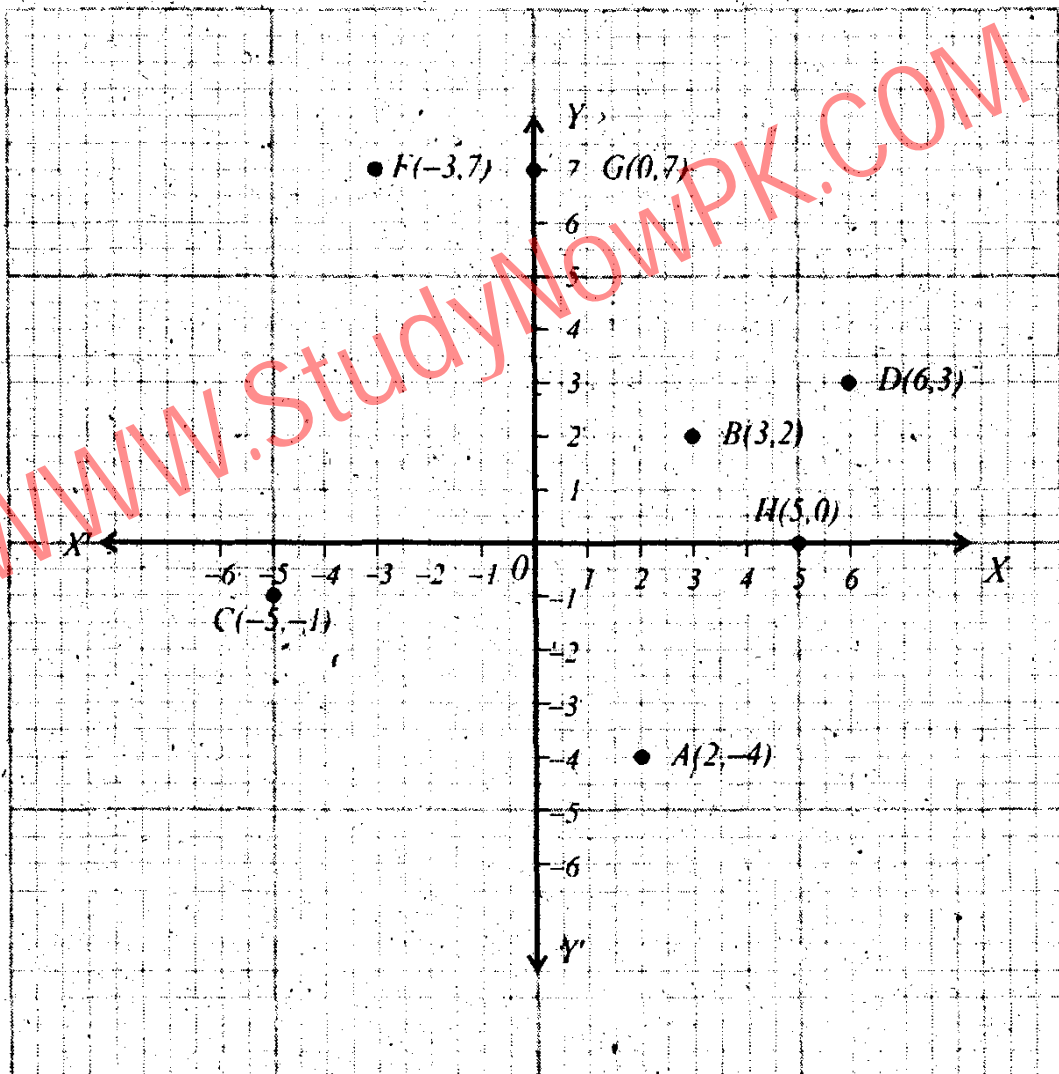
$\{x, y\} = \{y, x\}$, but $(x, y) \neq (y, x)$

SOLVED EXERCISES

EXERCISE 9.1

Q.1- Represent the points on the graph whose co-ordinates are given below.

(i)	A(2, –4)	*(ii)*	B(3,2)
(iii)	C(–5,–1)	*(iv)*	D(6,3)
(v)	B(3,2)	*(vi)*	F(–3,7)
(vii)	G(0,7)	*(viii)*	H(5,0)

Solution:

Q.2- Write down the co-ordinates of:

(i) **Origin**

Ans. Co-ordinates of Origine $= (0, 0)$

(ii) **A point lying on the left hand side of x-axis and at a distance of 5 units from the origine.**

Ans. A point lying on left side of Origene on *x-axis* 5 units from Origine $= (-5, 0)$

(iii) **A point lying on the right hand side of the origine on x-axis at a distance of 3 units from the origine.**

Ans. A point on right side of Origine on *x-axis* at a distance of 3 units from the Origine $= (3, 0)$

(vi) **A point lying above x-axis and on y-axis at a distance of 4 units.**

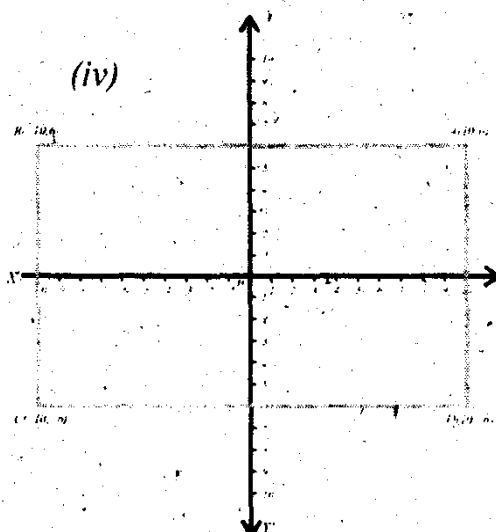
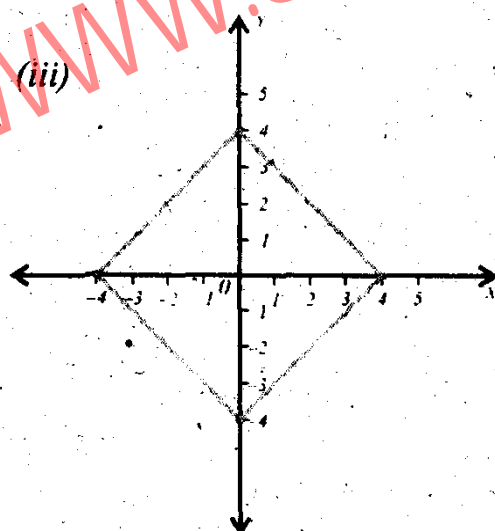
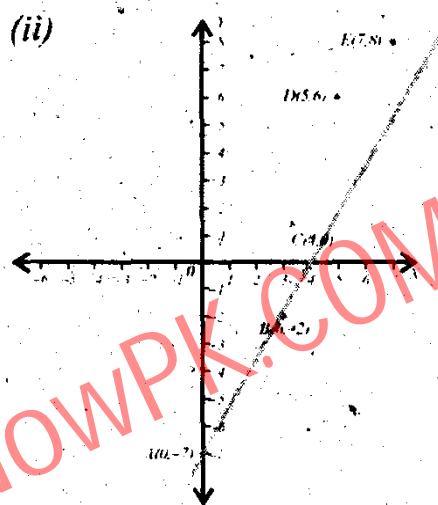
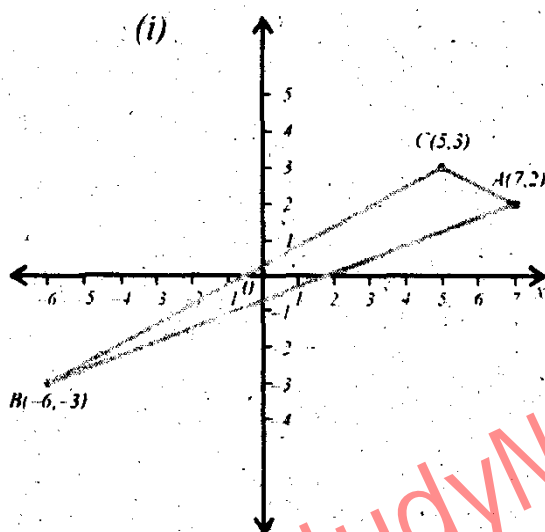
Ans. A point above *x-axis* on *y-axis* at a distance of 4 units from Origine $= (0, 4)$

(v) **A point lying below x-axis and on y-axis at a distance of 6 units.**

Ans. A point below *x-axis* and on *y-axis* 6 unit from Origine $= (0, -6)$

Q.3- **Draw the figures with help of the following points on the graph paper.**

(i)	A(7, 2),	B(–6,–3),	C(5,3)		
(ii)	A(0, –7),	B(3,–2),	C(4,0),	D(5,6)	E(7,8)
(iii)	A(4, 0),	B(0,4),	C(–4,0)	D(0,–4)	
(iv)	A(10, 6),	B(–10,6),	C(–10,–6)	D(10,–6)	

Ans.

EXERCISE 9.2

Q.1- Draw the graph of $y = 3x$

Solution:

In the given equation put

$x = -3, -2, -1, 0, 1, 2, 3$

We get the values of y as:

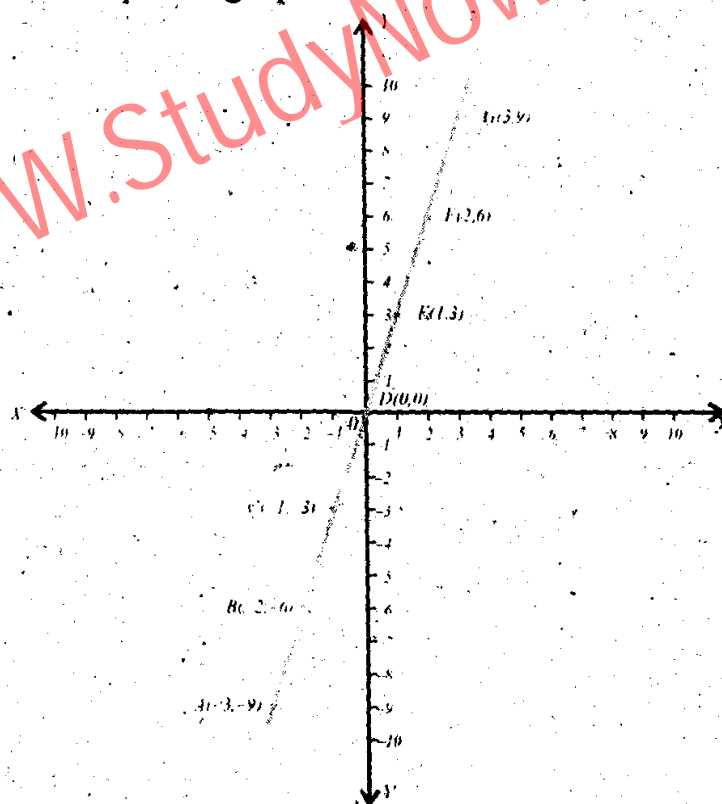
$y = -9, -6, -3, 0, 3, 6, 9$

So, We construct the table.

x	-3	-2	-1	0	1	2	3
y	-9	-6	-3	0	3	6	9

So locate the points

$(-3,-9),(-2,-6),(-1,-3),(0,0),(1,3),(2,6)$ and $(3,9)$

on the graph paper and join them to get a straight line as the required graph.

Q.2- Draw the graph of $y = x + 7$

Solution:

Replace x by the numbers $-4, -3, -2, -1, 0, 1, 2,$

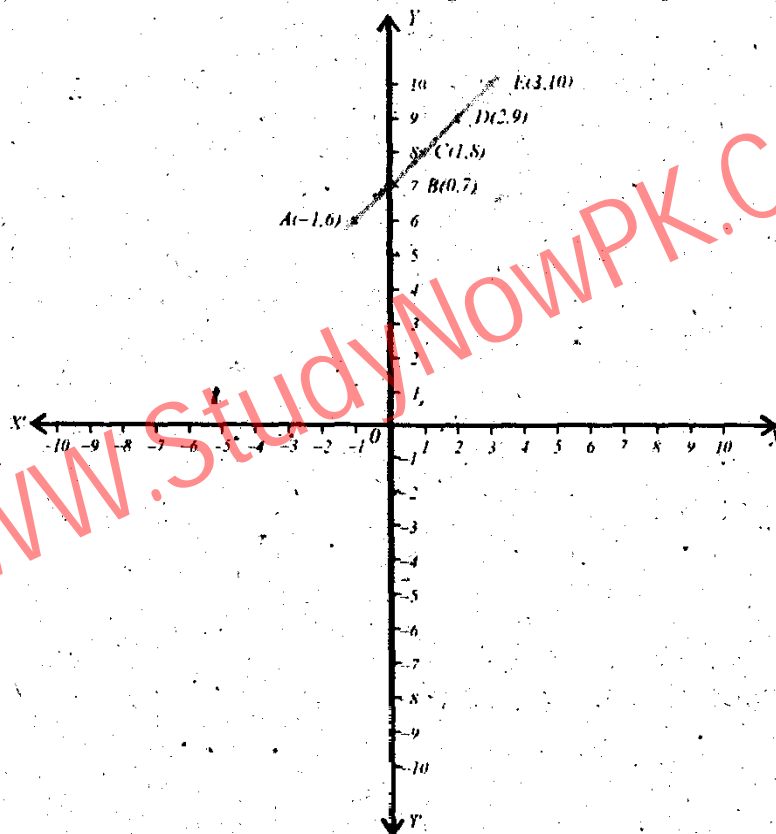
We get the values of y as $3, 4, 5, 6, 7, 8, 9.$

So, We get the table.

x	-4	-3	-2	-1	0	1	2
y	3	4	5	6	7	8	9

On the graph paper locate the points

$(-4,3),(-3,4),(-2,5),(-1,6),(0,7),(1,8),(2,9)$

and jion them to get the required strainght line.

Q.3- Draw the graph of $y = 2x - 3$

Solution:

In the given equation put the values of x.

$x = -3, -2, -1, 0, 1, 2, 3, 4, 5.$

We will get the values of y as:

$y = -9, -7, -5, -3, -1, 0, 1, 3, 5, 7$

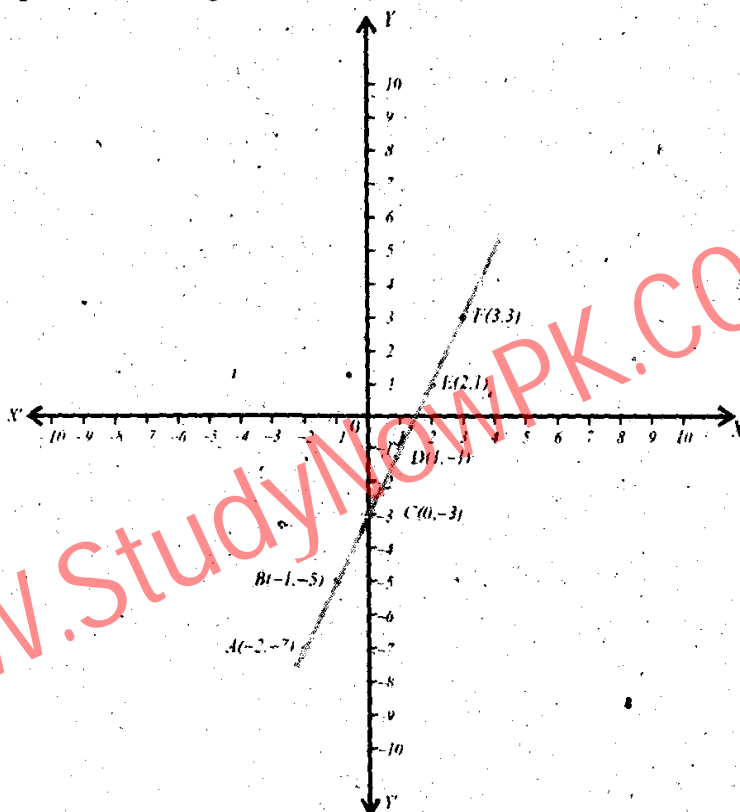
Now we have the table.

x	-3	-2	-4	0	1	2	3	4	5
y	-9	-7	-5	-3	-1	1	3	5	7

So the points on the line are

$(-3,-9),(-2,-7),(-1,-5),(0,-3),(1,-1),(2,1)$

$(3,3),(4,5),(5,7)$

Locate these points on the graph paper and draw the required strenght line.

Q.4- Draw the graph of $y = 4x + 1$

Solution:

Put the values of x in the given equation as:

$x = -2, -1, 0, 1, 2, 3$

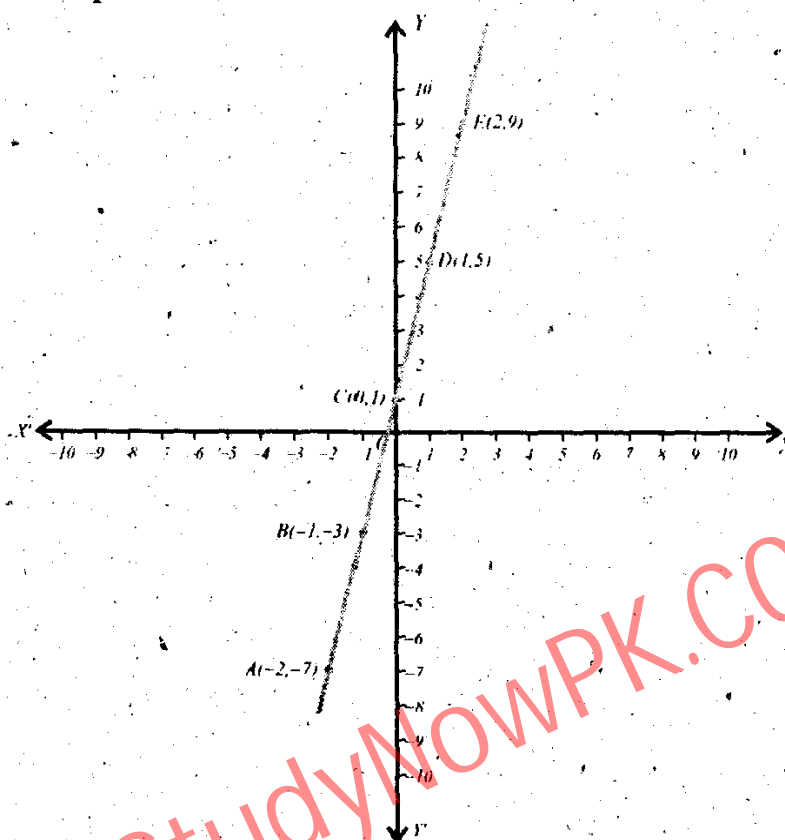
We get $y = -7 - 3, 1, 5, 9, 13$

So the table of values is

x	-2	-1	0	1	2	3
y	-7	-3	1	5	9	13

The point on the graph are.

$(-2,-7),(-1,-3),(0,1),(1,5),(2,9)$ and $(3,13)$.

Draw these points on the graph and joint them to get the required line.

Q.5- Draw the graph of $y=-\frac{x}{2}-\frac{3}{2}$

Solution:

Replace x by numbers $-7, -5, -3, -1, 1, 3, 5$

We get the values of y as:

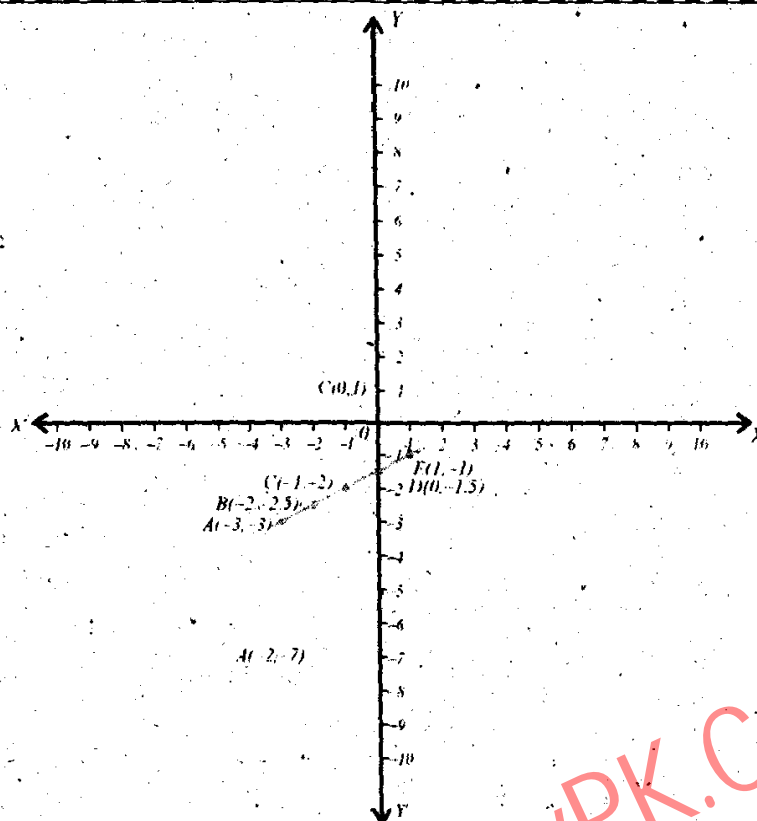
$y = 2, 1, 0, -1, -2, -3, -4$

So, We get the table.

x	-7	-5	-3	-1	1	3	5
y	2	1	0	-1	-2	-3	-4

Thus the points on the line are.

$(-7,2),(-5,1),(-3,0),(-1,-1),(1,-2),(3,-3),(5,-4)$

Locate these points on graph and join them.

Q.6- Draw the graph of $y = x - 1$

Solution:

In the given equation.

Put $x = -2$ we get $y = -3$

Put $x = -1$ we get $y = -2$

Put $x = 0$ we get $y = -1$

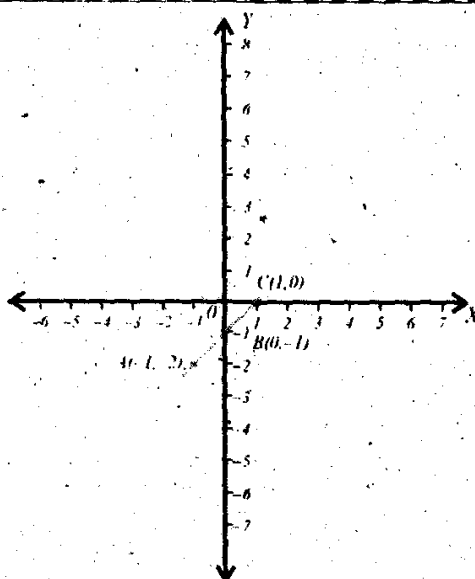
For $x = 1$, $y = 0$

For $x = 2$, $y = 1$

For $x = 3$, $y = 2$

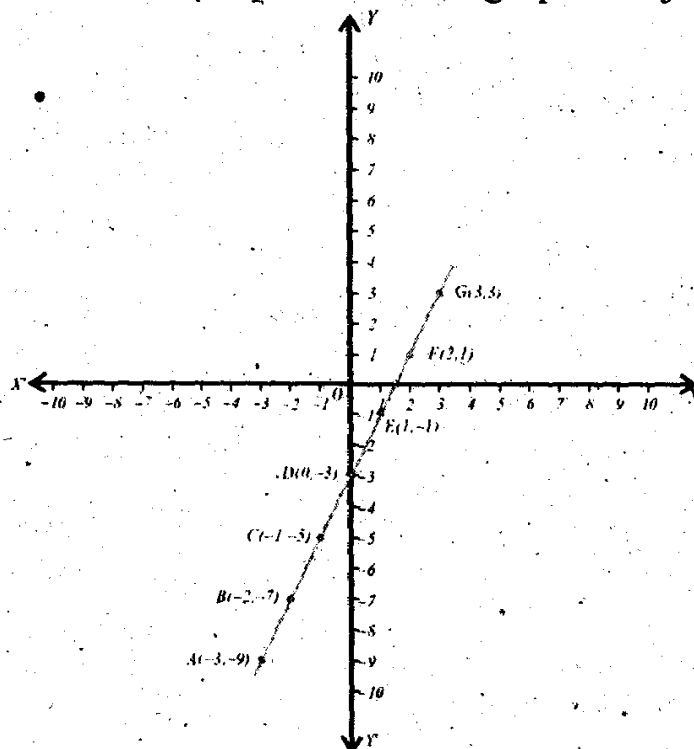
Thus the points on the line are

$(-1, -2), (0, -1), (1, 0), (2, 1), (3, 2)$

Locate these points on the graph and join them.

Q.7- Draw the graph of $y = 2x - 3$

Solution: Consider the equation $y = 2x - 3$

For $x = -2, y = -7 \Rightarrow (-2, -7)$ is on the line.
For $x = -1, y = -5 \Rightarrow (-1, -5)$ is on the line.
For $x = 0, y = -3 \Rightarrow (0, -3)$ is on the line.
For $x = 1, y = -1 \Rightarrow (1, -1)$ is on the line.
For $x = 2, y = 1 \Rightarrow (2, 1)$ is on the line.
For $x = 3, y = 3 \Rightarrow (3, 3)$ is on the line.

Thus locate these points on the graph and join them.

Q.8- Draw the graph of $y = 3x + 5$

Solution:

Consider the equation $y = 3x + 5$

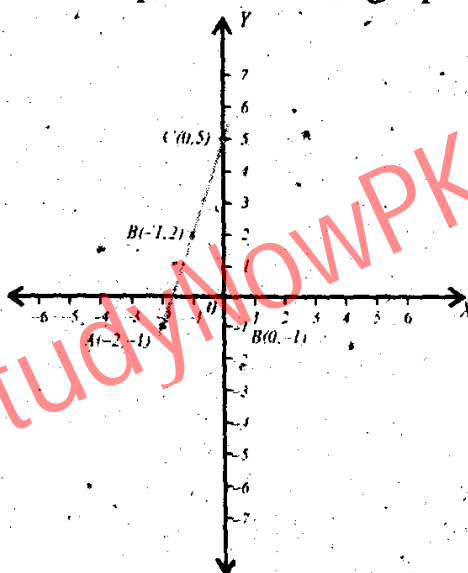
For $x = -3, y = -4 \Rightarrow (-3, -4)$ is on the line.

For $x = -2, y = -1 \Rightarrow (-2, -1)$ is on the line.

For $x = -1, y = 2 \Rightarrow (-1, 2)$ is on the line.

For $x = 0, y = 5 \Rightarrow (0, 5)$ is on the line.

For $x = 1, y = 8 \Rightarrow (1, 8)$ is on the line.

Now locate these points on the graph and join them.

Q.9- Draw the graph of $y = \frac{x}{2}$

Solution:

Consider the equation $y = \frac{x}{2}$

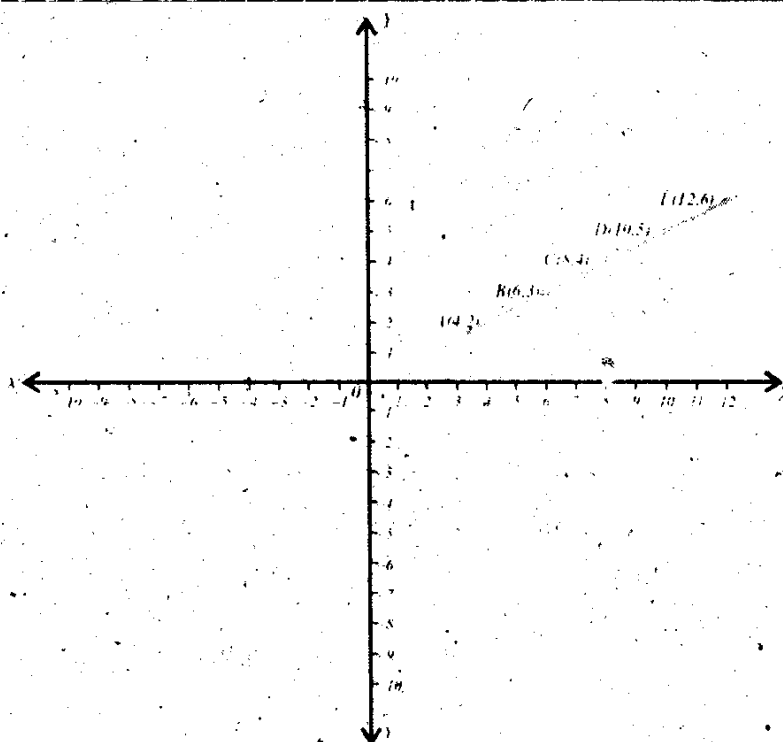
For $x = -4, y = -2 \Rightarrow (-4, -2)$ is on the line.

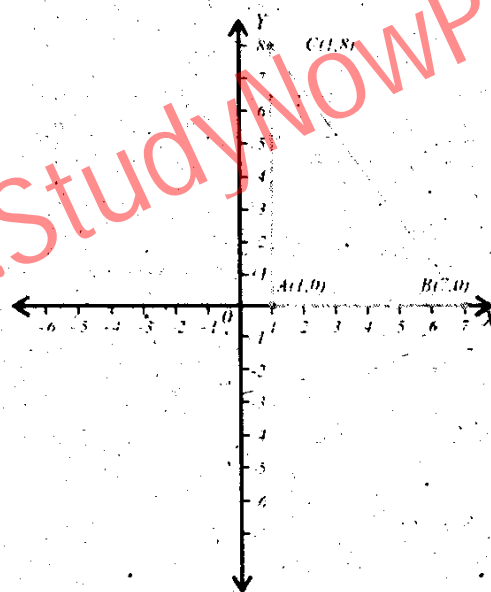
For $x = -2, y = -1 \Rightarrow (-2, -1)$ is on the line.

For $x = 0, y = 0 \Rightarrow (0, 0)$ is on the line.

For $x = 2, y = 1 \Rightarrow (2, 1)$ is on the line.

For $x = 4, y = 2 \Rightarrow (4, 2)$ is on the line.

Draw these points on the graph paper and join them.

Q.10- Draw the graph by plotting A(1,0), B(7,0) and C(1,8)

Solution:

Q.11- Draw the graph from the given tables.

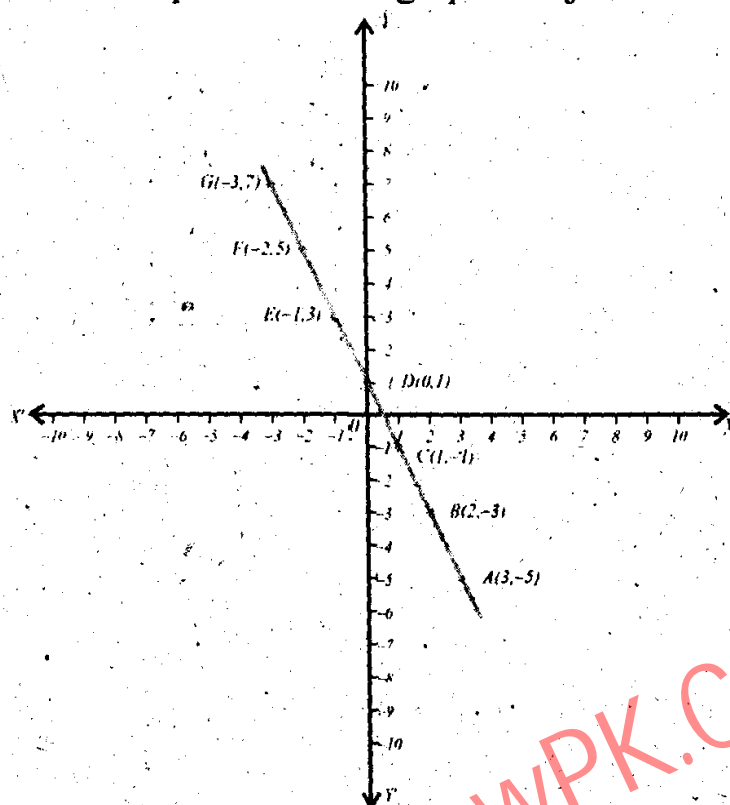
(i)

x	3	2	1	0	−1	−2	−3
y	−5	−3	−1	1	3	5	7

Solution: From the values of x and y given in the table.

We get the points

$(3,-5),(2,-3)(1,-1),(0,1),(-1,3),(-2,5),(-3,7)$

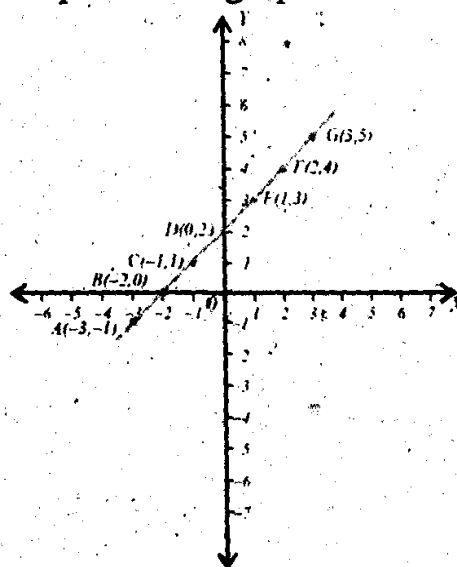
Draw these points on the graph and join them.

(ii)

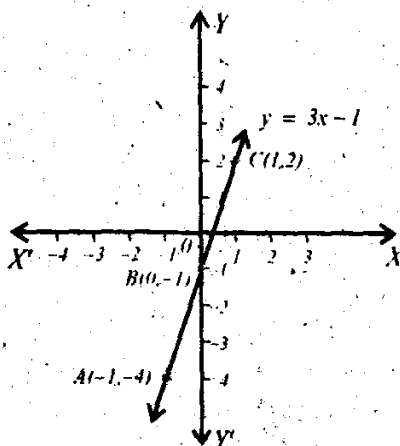
x	−3	−2	−1	0	1	2	3
y	−1	0	1	2	3	4	5

Solution: From the values of x and y given in the table.

We get the points

$(-3,-1),(-2,0),(-1,1)(0,2),(1,3),(2,4),(3,5)$

Locate these points on graph and draw the straight line

Identify through the given graphs the domain and the range of a function

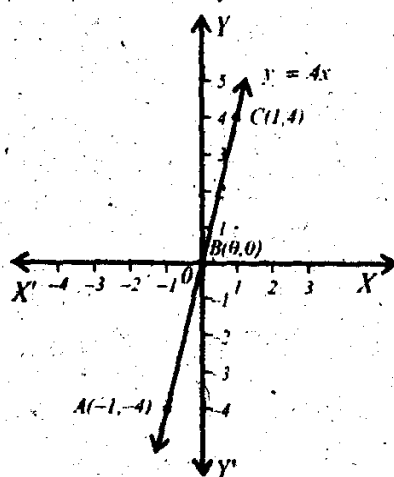
Q.12-

Solution:

The integral subset of Domain =

The set of integral values of $x = \{...,-1,0,1...\}$

the integral sub set a range =

The set of integral values of $y = \{...,-4,-1,2...\}$

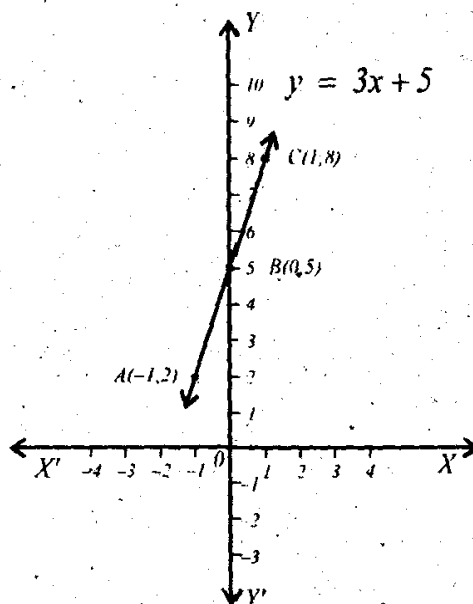
Q.13-

Solution:

The integral subset of Domain =

The set of integral values of $x = \{...,-2,-1,0,1,2...\}$

the integral sub set a range =

The set of integral values of $y = \{...,-4,0,4...\}$

Q.14-

Solution:

The integral subsets of Domain and range are.

The set of integral values of $x = \{..., -2, -1, 0, 1, 2...\}$

The set of integral values of $y = \{..., 2, 5, 8...\}$

EXERCISE 9.3

Q.1- The table gives temperatures in dgrees Fahrenheit ^{0}F and the equivalent values in degrees Centigrade ^{0}C.

Temperatures in ^{0}F	57	126	158	194
Temperatures in ^{0}C	14	52	70	90

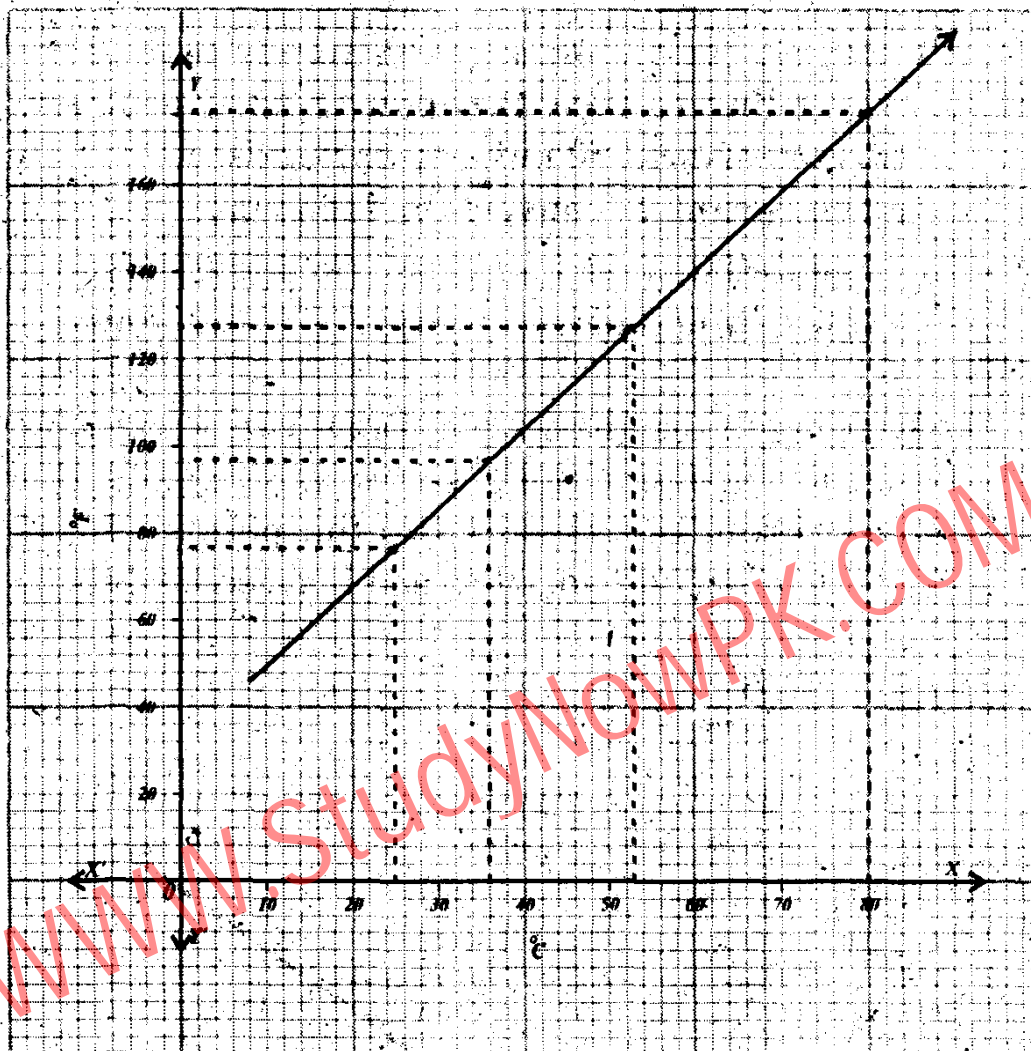
Plot these points on a graph paper for centigrade values from 0 to 100 and Fahrenheit value from 0 to 220. Let 5 small squares represent 20 units on each axis. Use your graph to convert the following:

(a) 97 ^{0}F into ^{0}C **(b)** 127^{0}F into ^{0}C

(c) 25 ^{0}C into ^{0}F **(d)** 80 ^{0}C into ^{0}F

Solution:

According to the given scale, take Centigrade degree along *x-axis* and Fahrenheit values along *y-axis*.

The points $(14,57)$, $(52,126)$, $(70,158)$ and $(90,194)$ are given. Locate these points and joining them. Draw the straight line.

The graph shows that

(i) Corresponding to $97\ ^0F$, the points on the graph gives $(36.10)\ ^0C$

(ii) Similarly we can find $127\ ^0F = 52.8\ ^0C$

(iii) $25^0C = 77^0F$

(iv) $80^0C = 176^0F$

Q.2- **The table shows the conversion from US Dollars ($) to Pounds (£) for various amounts of money.**

$	50	100	200
£	35	70	140

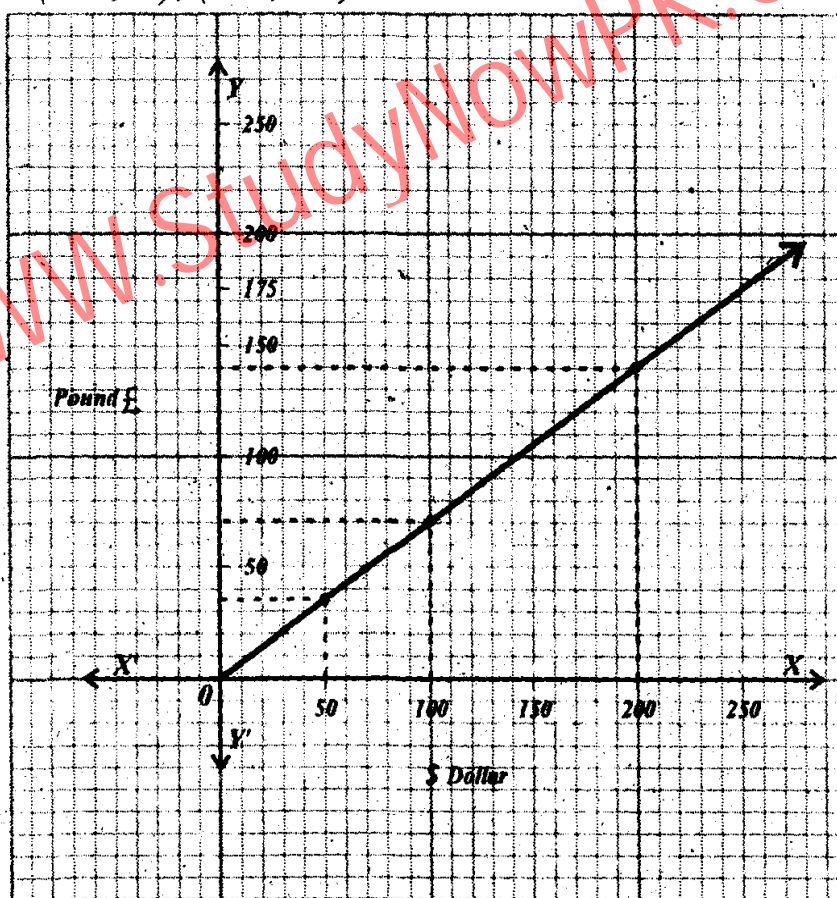
Plot these points on a graph paper and draw a straight line to pass through them. Let 5 small squares represent 50 units on each exis.

Use your graph to convert the following:

a) **160 dollars into £** **b)** **96 dollars into £**

c) **120 £ into dollars** **d)** **76 £ into dollars**

Solution:

According to the given scale. Draw *x-axis* and *y-axis*, taking US Dollers along *x-axis* and Pounds along *y-axis*. From the given table the points *(50,35)*, *(100,70)*, *(200,140)* are taken and Located the line.

By this line Dollars and Pounds can be inter convertible.

(a) Corresponding to *160* dollars we nate the point *(160,112)*. So it means.

160 Dollars = *112* Pounds.

Similarly, with the help of this graph.

We see that

(b) *96* Dollars = *67.2* Pounds.

(c) *120* Pounds = *171.4* Dollars.

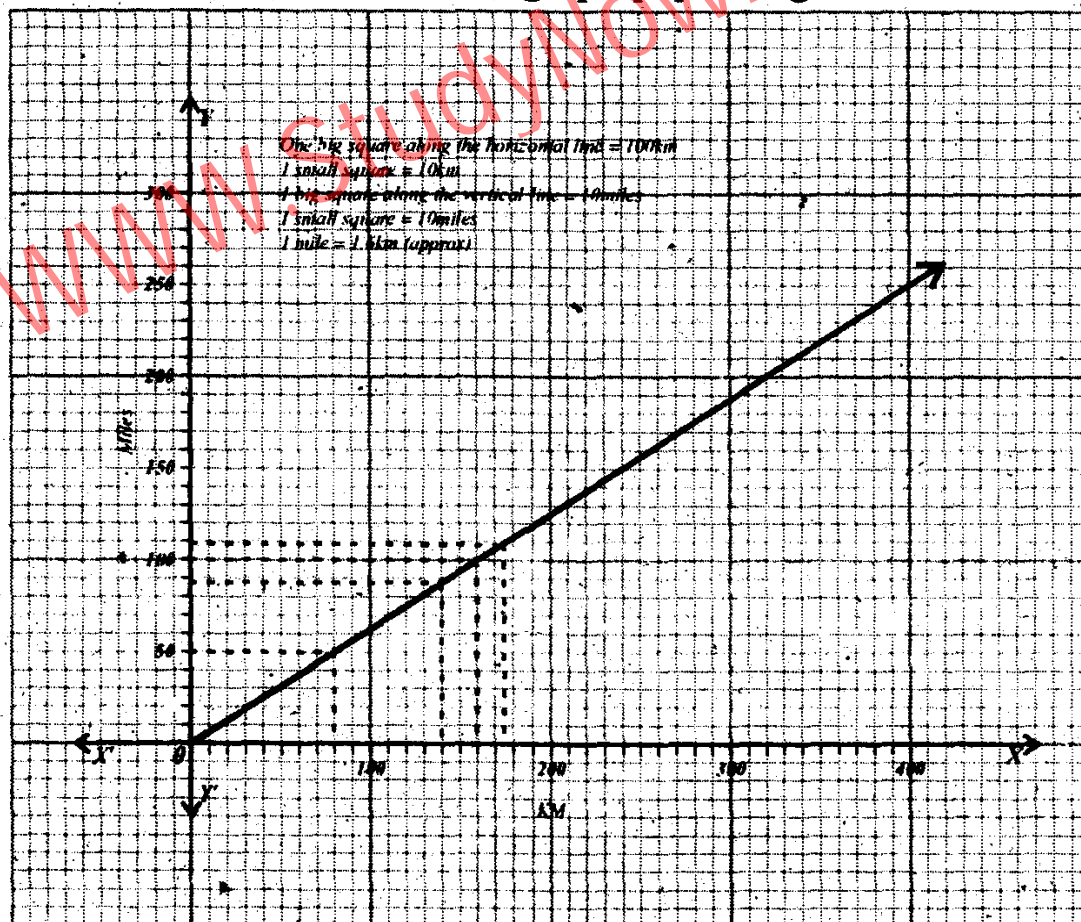
(d) *76* Pounds = *108.6* Dollars.

Q.3- The table below gives various distances in kilometers with the equivalent values in miles.

Kilometers	0	100	200	300
Miles	0	62.5	125	187.5

Plot these values on a graph paper taking 10 small squares equal to 100 kilometers on x-axis and 10 small squares equal to 100 miles on y-axis. Use your graph to convert the following:

a) 140 kilometers into miles b) 175 kilometers into miles
c) 50 miles into kilometers d) 100 miles into kilometers

Solution: According to the given scale and table. The points and line are drown on graph paper as given below

This conversion line shows that

(a) 140 km = 87.5 Miles.

(b) 175 km = 109.40 Miles.

(c) 50 Miles = 80 km.

(d) 100 Miles = 160 km.

Q.4- Use the graph in article 9.2.3 to convert:

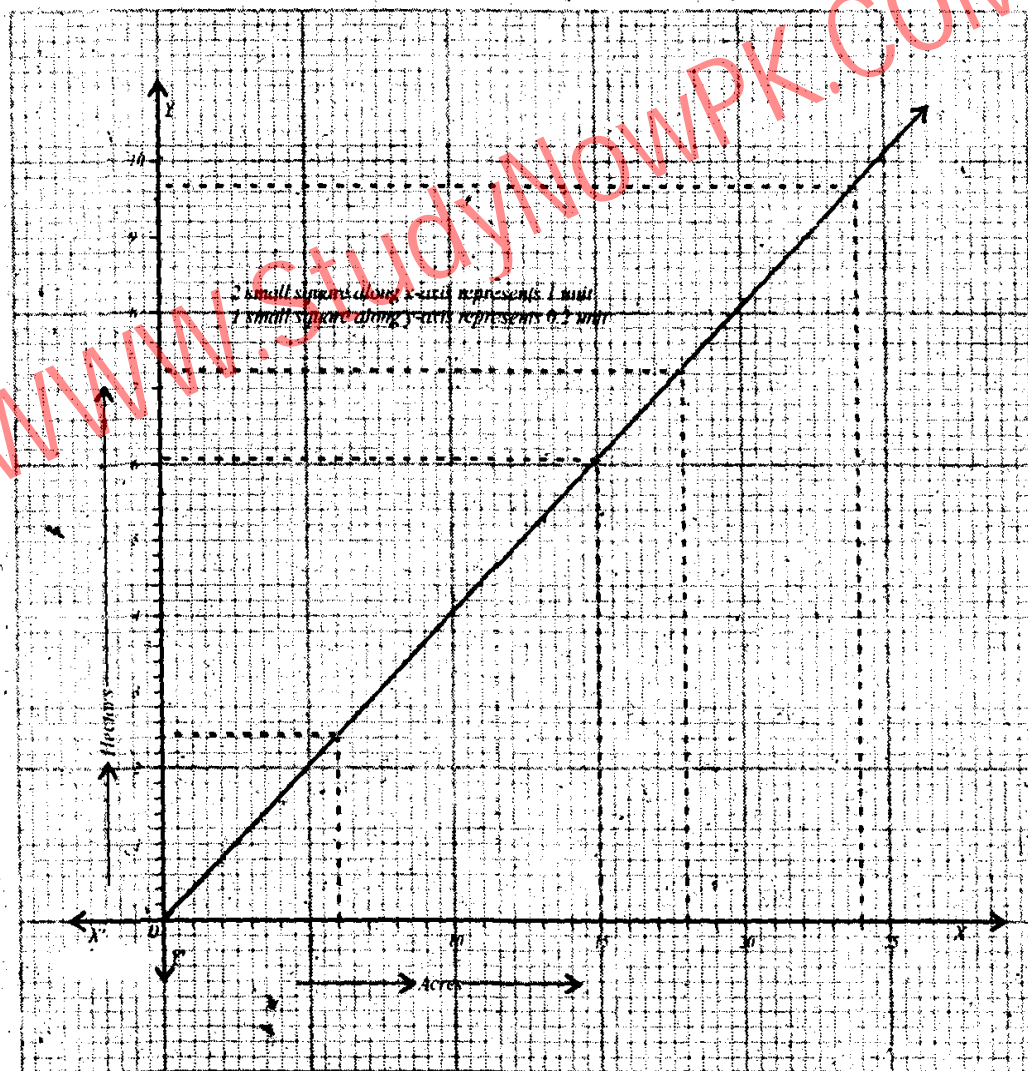
(a) 6 acres into hectares.

(b) 18 acres into hectares.

(c) 24 acres into hectares.

(d) 6.0702 hectares into acres.

Solution:

The graph refered in the question is given below.

The graph shows that

(a)	6 acres	=	2.4278 Hectars.
(b)	18 acres	=	7.2833 Hectars.
(c)	24 acres	=	9.7111 Hectars.
(d)	6.0702 Hectars	=	15.00 acres.

Review Exercise 9

Q.1- Encircle the correct answer.

(i) The co-ordinates of origin are:

(a) (1,0) (b) (0,1) (c) (0,0) (d) (1,1)

(ii) The perpendicular distance of a point form y-axis is called

(a) ordinate (b) abscissa (c) origin (d) straight line

(iii) The perpendicular distance of point from x-axis is called

(a) ordinate (b) abscissa (c) origin (d) straight line

(iv) For $x = 1$ in $2x + y = 6$, we have $y = ?$

(a) 8 (b) 4 (c) −8 (d) −4

(v) For $y = 2$ in $2x + y = 6$, we have $x = ?$

(a) 4 (b) −4 (c) 2 (d) −2

(vi) Graphs of equations in the form $y = c$ have y co-ordinate:

(a) 1 (b) c (c) 0 (d) −1

(vii) Graphs of equations in the form $x = a$ have x co-ordinate:

(a) a (b) undefined (c) 1 (d) c

(viii) $f(x) = \frac{x}{2}, 4 \le x \le 12$, x is a multiple of "2".

The domain of $f(x)$ is:

(a) $\{4,6,8,10,12\}$ (b) $\{6,8,10\}$

(c) $\{4,6,8,10\}$ (d) $\{2,3,4,5,6\}$

(ix) $f(x) = \frac{x}{2}, 4 \le x \le 12$, x is a multiple of "2".

The range of $f(x)$ is:

(a) $\{4,6,8,10,12\}$ (b) $\{2,3,4,5,6\}$

(c) $\{3,4,5\}$ (d) $\{2,3,4,5,6\}$

(x) If $y = 3x$, then for $x = 2$, we have $y = ?$

(a) 0 (b) 6 (c) -3 (d) 2

Ans:

(i) c	(ii) b	(iii) a	(iv) b
(v) a	(vi) b	(vii) a	(viii) a
(ix) b	(x) b		

Q.2- Fill in the blanks.

(i) A plane consisting of two number lines OX and OY intersecting at right angle at "O" is called a ______

(ii) The perpendicular distance of a point from y-axis is called______

(iii) The perpendicular distance of a point from x-axis is called______

(iv) The pair of numbers $(2,3)$ is called an______

(v) The horizontal line $X'OX$ is called______

(vi) The vertical line YOY' is called______

(vii) For a point $(-1,-2)$ we move 1 unit towards left of "O" and 2 units______

(viii) The co-ordinate of origin are______

(ix) An equation for a straight line that consists of y term is as______

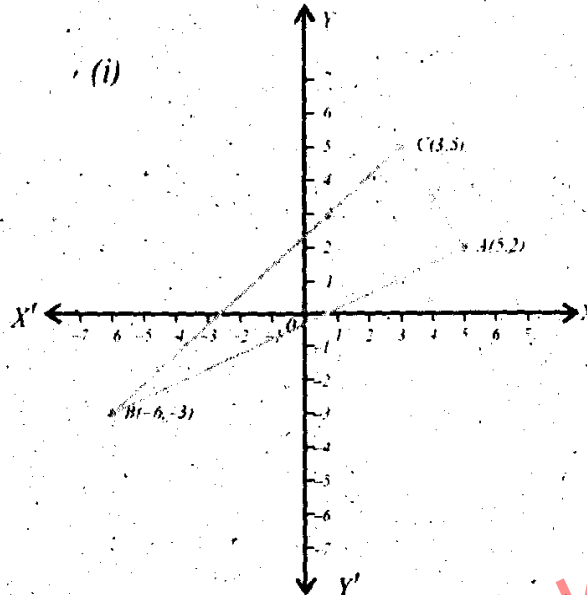
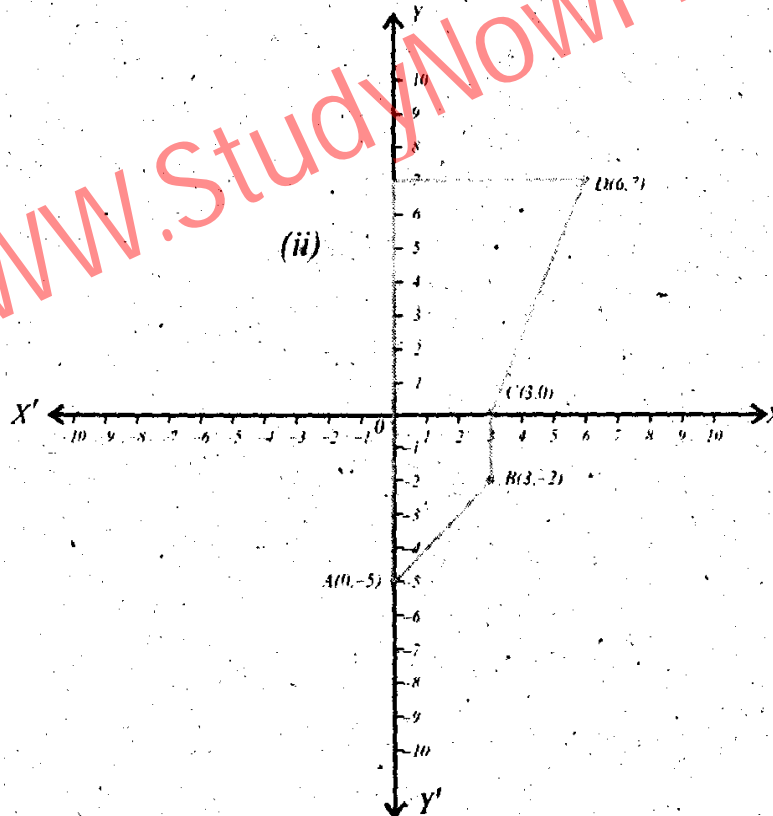
(x) In the graph of $2x + y = 6$, the x-intercept is ______

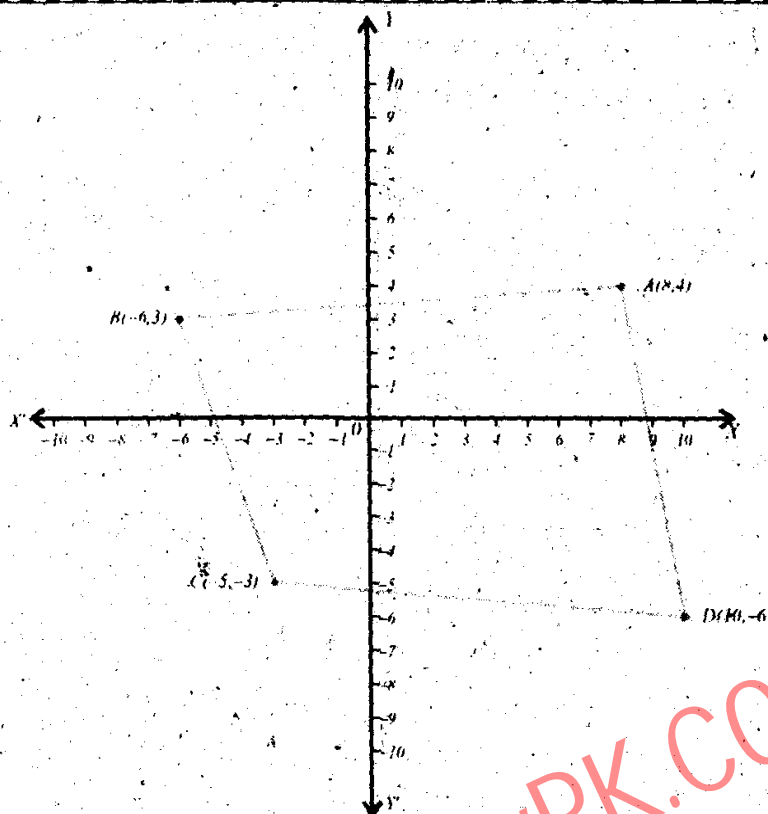
Ans:

(i) Co-ordinate plane	(ii) Abscissa	(iii) Ordinate	(iv) Ordered pair
(v) x-axis	(vi) y-axis	(vii) Downward of x-axis	(viii) (0,0)
(ix) $y = c$	(x) 3		

Q.3- Draw the figures with the help of the following points on the graph paper.

Solution:

(i) A(5,2), B(-6,-3) and C(3,5)

(ii) A(0,-5), B(3,-2), C(3,0) and D(6,7)

(iii) A(8,4), B(-6,3), C(-5,-3) and D(10,-6).

A(8,4)
B(-6,3)
C(-5,-3)
D(10,-6)
X'
X
Y
Y'

Q.4- Sketch the graph

(i) Sketch the graph of $y = 3x + 2$

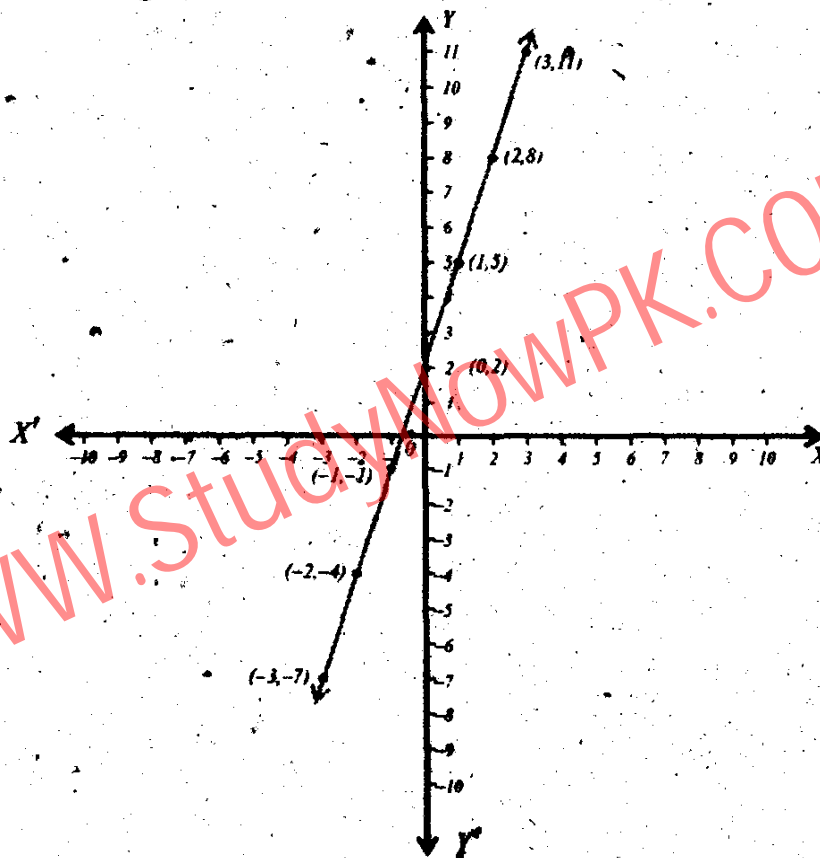
Solution: Put different values of x in the equation.

For $x = -3, y = -7 \Rightarrow (-3, -7)$ is on the graph.

For $x = -2, y = -4 \Rightarrow (-2, -4)$ is on the graph.

For $x = -1, y = -1 \Rightarrow (-1, -1)$ is on the graph.

For $x = 0, y = 2 \Rightarrow (0, 2)$ is on the graph.

Now we plot these points on graph paper and join them as given below.

(ii) Sketch the graph of $y = 2x + 1$

Solution:

Replace x by different numbers.

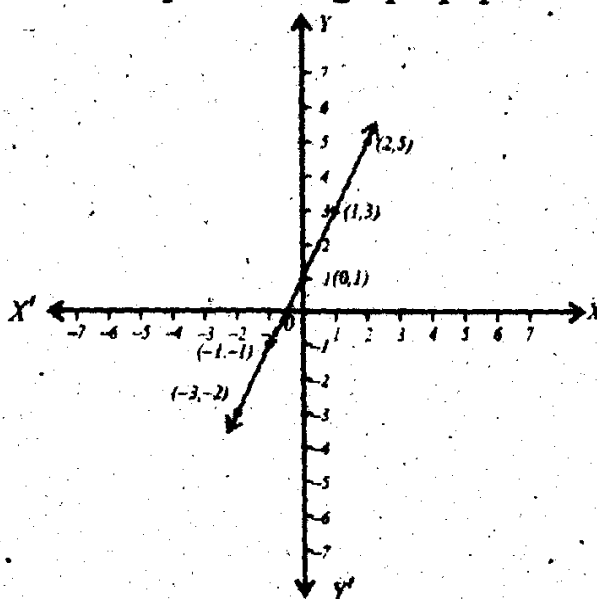
For $x = -3, y = -5 \Rightarrow (-3, -5)$ is on the graph.

For $x = -2, y = -3 \Rightarrow (-2, -3)$ is on the graph.

For $x = -1, y = -1 \Rightarrow (-1, -1)$ is on the graph.

For $x = 0, y = 1 \Rightarrow (0, 1)$ is on the graph.

For $x = 2, y = 3 \Rightarrow (2, 3)$ is on the graph.

Now plot these points on graph paper and join them.

(iii) Sketch the graph of $y = x + 1$

Solution:

Here

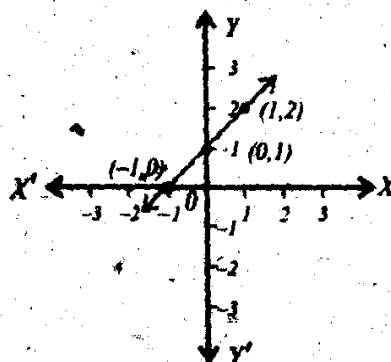
For $x = -2, y = -1 \Rightarrow (-2, -1)$ is on the graph.

For $x = -1, y = 0 \Rightarrow (-1, 0)$ is on the graph.

For $x = 0, y = 1 \Rightarrow (0, 1)$ is on the graph.

For $x = 1, y = 2 \Rightarrow (1, 2)$ is on the graph.

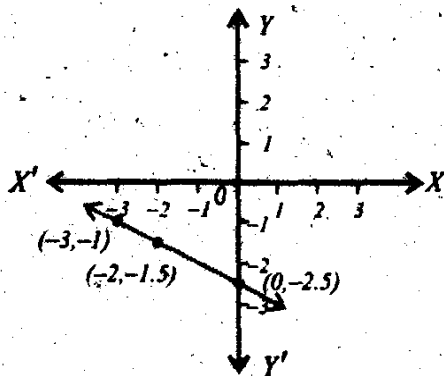
For $x = 2, y = 3 \Rightarrow (2, 3)$ is on the graph.

Locate these points on graph paper and join them as given below.

(iv) Sketch the graph of $y = \frac{x}{2} - \frac{5}{2}$

Solution: Replace x for different numbers.

For $x = -3, y = -1 \Rightarrow (-3, -1)$ is on the graph.

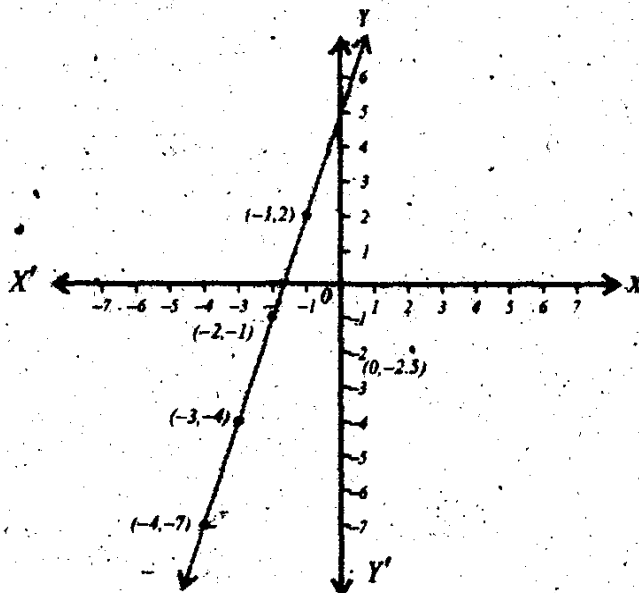
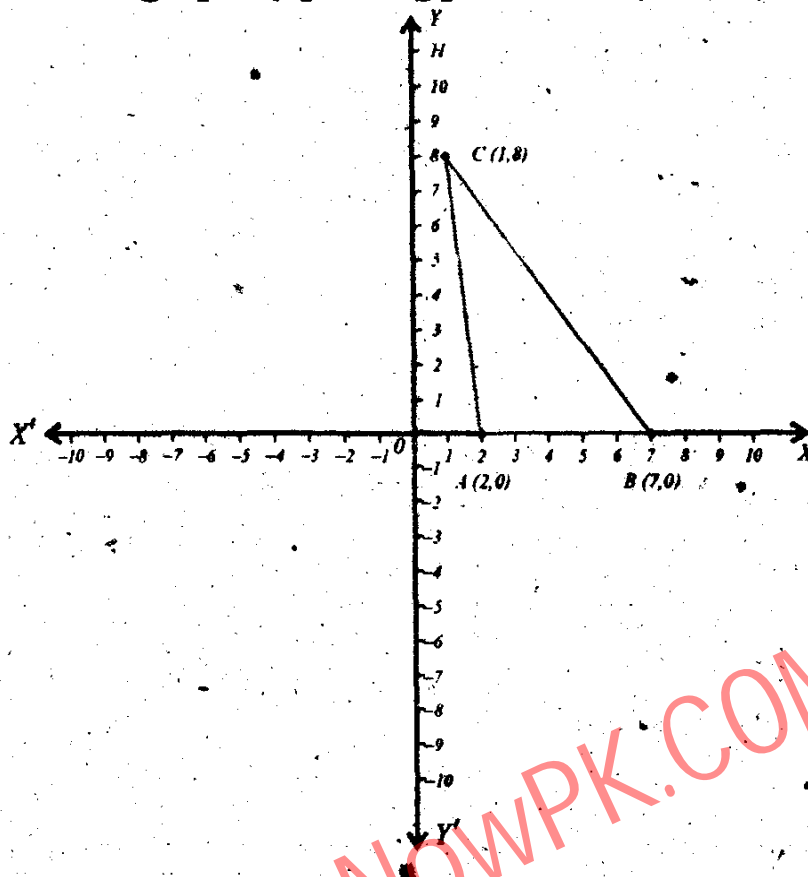
For $x = -1, y = -2 \Rightarrow (-1, -2)$ is on the graph.
For $x = 1, y = -3 \Rightarrow (1, -3)$ is on the graph.
For $x = 3, y = -4 \Rightarrow (3, -4)$ is on the graph.

Locate these points on graph paper and join them as given below.

(v) Sketch the graph of $y = 3x + 4$

Solution:

Replace x for different numbers.

For $x = -2, y = -2 \Rightarrow (-2, -2)$ is on the graph.
For $x = -1, y = 1 \Rightarrow (-1, 1)$ is on the graph.
For $x = 0, y = 4 \Rightarrow (0, 4)$ is on the graph.
For $x = 1, y = 7 \Rightarrow (1, 7)$ is on the graph.
For $x = 2, y = 10 \Rightarrow (2, 10)$ is on the graph.

Locate these points on graph paper and join them as given below.

Q.5- **Draw the graph by plotting points A(2,0), B(7,0) and C(1,8).**

Q.6- **If** $f(x)=\frac{x}{2}$, $4\le x\le 12$ **and x is an integer multiple of 2. Then find the domain and range of f(x).**

Ans. As $4\le x\le 12$ and x is an integer multiple of 2. So values of x in the funtion. We get

$$f(x)=\frac{x}{2}\Rightarrow f(4)=\frac{4}{2}=2$$

For $\quad x=6\Rightarrow f(6)=\frac{6}{2}=3$

For $\quad x=6\Rightarrow f(8)=\frac{8}{2}=4$

For $\quad x=10\Rightarrow f(10)=\frac{10}{2}=5$

For $\quad x=12\Rightarrow f(12)=\frac{12}{2}=6$

Thus $\quad f(x)=\{(4,2),(6,3),(8,4),(10,5),(12,6)\}$

So $\quad$ Dom: $f(x)=\{4,6,8,10,12\}$

Rng: $f(x)=\{2,3,4,5,6\}$

MULTIPLE CHOICE QUESTIONS

Q.1- Tick the best of given choice.

(i) Choose the wrong statement.

(a) $\{x, y\} = \{y, x\}$ (b) $(x, y) = (y, x)$

(c) $(9, 1) = (9, 1)$ (d) $(p, q) = (p, q)$

Q.2- The point $(-3, 0)$ is

(a) On *x-axis* (b) On *y-axis*

(c) Above *x-axis* (d) Blow *x-axis*

Q.3- Graph of a Linear equation is

(a) Alwayes line (b) Never line

(c) Some times lime

(d) Some times other than line.

Q.4- The graph of equation $y = 3x + 1$ passes through.

(a) (0,0) (b) (2,5)

(c) (3,10) (d) (0,2)

Q.5- The line $y = 5$ is

(a) Parallel to *x-axis* (b) Parallel to *y-axis*

(c) Cuts *x-axis* (d) Not cuts *y-axis*

Q.6- The line $x = -2$ is

(a) Above *x-axis* (b) Below *x-axis*

(c) On left of *y-axis* (d) On right of *y-axis*

Q.7- The line $y = 2x + 6$ Cuts x-axis at

(a) $x = 3$ (b) $x = -3$

(c) $y = 6$ (d) $y = 8$

Q.8- The first element of ordered pair (x, y) is called

(a) Ordinate (b) Abscissa

(c) Domain (d) Range

Q.9- The equation of a line parallel to x-axis and below x-axis is

(a) $y = 5$ (b) $y = -3$

(c) $x = -5$ (d) $x = 3$

Q.10- **The equation of a line parallel to y-axis and on right side of y-axis is**

(a) $x = 3$ (b) $x = -3$

(c) $y = 3$ (d) $y = -3$

MODEL CLASS TEST

Time : One Hour Max Marks : 25

Q.1- **Tick the best of given choices.**

(i) The point $(-3, 1)$ is

(a) On *x-axis* (b) On *y-axis*

(c) Above *x-axis* (d) below *x-axis*

(ii) The point $(1, -4)$ is on the line

(a) $y = x + 1$ (b) $y = 2x + 2$

(c) $y = 2x - 6$ (d) $y = 2x + 6$

(iii) The line $y = 3x$, press through the

(a) Origine (b) $(0, 1)$

(c) $(3, 0)$ (d) $(3, 3)$

(iv) In the function $y = 3x + 2$, the set of values of x is called

(a) Range (b) Domain

(c) Ordinate (d) Abscissa

(v) $0^0 C$ is equal to

(a) ^0F (b) 10^0F

(c) 25^0F (d) 32^0F

(vi) 200 Kilometers are equal to

(a) 100 Miles (b) 125 Miles

(c) 150 Miles (d) 200 Miles

(vii) Two units of the same quantity can be inter converted easily by.

(a) Linear graph (b) Non linear graph

(c) Conversion graph (d) Point graph.

Q.2- Attempt any five questions.

(i) Plot the points and join them orderly.

$A(0,-7), B(3,-2), C(4,0)$

(ii) Find four points lying on the line $y = 2x + 3$

(iii) Draw the graph of $y = 5$

(iv) Draw the graph of $x = -2$

(v) Draw the graph of $y = x$

(vi) Define domain and range of a funtion.

(vii) If $f(x) = \frac{x}{2}$, $4 \le x \le 12$ and x is an integer, multiple of 2, then find domain and range of $f(x)$.

Attemp anu two of the following questions.

Q.3- Draw the graph of $y = -\frac{x}{2} - \frac{5}{2}$

Q.4- Consider the table

Kilometers	0	100	200	300
Miles	0	62.5	125	187.5

Plot the graph and using this graph, convert

(a) 140 km into miles *(b)* 50 Miles into Km.

Q.5- Draw the graph of $y = 4x - 1$